

What is claimed is:

1. A method of driving in a display:
receiving an input signal having a first frequency;
5 generating an intermediate signal from the input
signal;
detecting whether the intermediate signal has
contiguous alternating states;
counting a number of contiguous non-alternating
10 states if the intermediate signal does not have contiguous
alternating states; and
determining whether the number is greater than one.
2. The method according to claim 1, wherein the input
15 signal includes a vertical synchronization signal.
3. The method according to claim 1, wherein the input
signal includes a data enable signal.
- 20 4. The method according to claim 1, wherein a reference
signal having a substantially the same frequency as the
first frequency is used to determine whether the
intermediate signal has contiguous alternating states.
- 25 5. The method according to claim 1, wherein the input
signal is from a computer and is for a liquid crystal
display.
- 30 6. The method according to claim 1, wherein the input
signal is determined to have an error if the number is
greater than one

7. A method of driving a display comprising:
receiving an input signal having a first frequency;
generating an intermediate signal from the input
signal;

5 determining whether the intermediate signal has
contiguous alternating states;

counting a number of contiguous non-alternating
states if the intermediate signal does have contiguous
alternating states; and

10 determining whether the number is equal to at least
two.

8. The method according to claim 7, wherein the input
signal includes a vertical synchronization signal.

15 9. The method according to claim 7, wherein the input
signal includes a data enable signal.

10. The method according to claim 7, wherein the first
20 frequency of the input signal is compared to a reference
frequency in determining whether the intermediate signal
has contiguous alternating states.

11. The method according to claim 7, wherein the input
25 signal is from a computer and is for a liquid crystal
display.

12. A method of driving a display comprising:

receiving an input signal having a first period corresponding to a number of lines in the display;

determining whether the first period is less than a
5 first reference period; and

outputting a signal of a first state if the first period is less than the first reference period.

13. The method according to claim 13, wherein the
10 receiving, determining and outputting steps are repeated and determining if the first state is output a second time.

14. A method of driving a display comprising:

15 receiving an input signal having a first period corresponding to a number of lines in the display;

determining whether the first period is greater than a first reference period; and

20 outputting a signal of a first state if the first period is greater than the first reference period.

15. The method according to claim 14, wherein the receiving, determining and outputting steps are repeated and determining if the first state is output a second
25 time.

16. A method of driving a display comprising:

receiving an input signal having a first period corresponding to a number of lines in the display;

30 determining whether the first period is less than a first reference period and greater than a second reference period; and

outputting a signal of a first state if the first

period is less than the first reference period and greater than the second reference period.

17. The method according to claim 16, wherein the
5 receiving, determining and outputting steps are repeated and determining if the first state is output a second time.

18. A method of driving in a display:
10 receiving a vertical synchronization signal;
generating an intermediate signal from the vertical synchronization signal, the intermediate signal indicating whether the vertical synchronization signal has an error;
and
15 outputting a desired video signal to the display when the error is detected.

19. The method according to claim 18, wherein the
20 desired video signal is an all black signal.

20. The method according to claim 18, wherein the
desired video signal includes a color signal.

21. The method according to claim 18, wherein the
25 desired video signal includes an image signal based on a previous image signal.

22. The method according to claim 18, wherein the
desired video signal includes a message signal.

30 23. The method according to claim 18, wherein the
desired video signal changes with time.

24. A method of driving in a display:

receiving a data enable signal;
generating an intermediate signal from the data enable signal, the intermediate signal indicating whether the data enable signal has an error; and
5 outputting a desired video signal to the display when the error is detected.

25. The method according to claim 24, wherein the desired video signal is an all black signal.

10 26. The method according to claim 24, wherein the desired video signal includes a color signal.

27. The method according to claim 24, wherein the
15 desired video signal includes an image signal based on a previous image signal.

28. The method according to claim 24, wherein the desired video signal includes a message signal.

20 29. The method according to claim 24, wherein the desired video signal changes with time.

30. A liquid crystal display device including a timing
25 controller provided with a signal presence determiner for detecting an application of an input signal from an interface, wherein said signal presence determiner comprising:

an oscillator for generating a reference clock having
30 the same frequency as a horizontal synchronizing signal and a pre-synchronizing signal having the same frequency as a vertical synchronizing signal;

a period detector for comparing a data enable signal

from the exterior thereof with the reference clock to output a period of the input signal with the aid of a detection reference signal and the pre-synchronizing signal;

- 5 a period comparator for comparing a period range between a desired maximum value and a desired minimum value of the input signal; and

 signal presence/absence comparing means for determining a presence/absence of the input signal in
10 response to a pulse number of the input signal detected within a period range between the maximum value and the minimum value during an application interval of the detection reference signal.

- 15 31. The liquid crystal display device as claimed in claim 30, wherein said period range between the maximum value and the minimum value of the period comparator can be controlled by a user.

- 20 32. The liquid crystal display device as claimed in claim 30, wherein said pulse number of the signal presence/absence comparing means can be controlled by a user.

- 25 33. A method of driving a liquid crystal display device including a timing controller provided with a signal presence determiner for detecting an application of an input signal from an interface, said method comprising the steps of:

- 30 generating a reference clock having the same frequency as a horizontal synchronizing signal and a pre-synchronizing signal having the same frequency as a vertical synchronizing signal;

comparing a data enable signal from the exterior with the reference clock to output a period of the input signal with the aid of a detection reference signal and the pre-synchronizing signal;

5 comparing a period range between a desired maximum value and a desired minimum value of the input signal; and

determining a presence/absence of the input signal in response to a pulse number of the input signal detected within a period range between the maximum value and the
10 minimum value during an application interval of the detection reference signal.

34. The method as claimed in claim 33, wherein said period range between the maximum value and the minimum
15 value can be controlled by a user.

35. The method as claimed in claim 33, wherein said pulse number of the input signal can be controlled by a user.